

Remarks

Claims 1-33 are pending. Claims 1-5, 9, 11-13, 17-21, 25, and 27-29 stand rejected, while claims 6-8, 10, 14-16, 22-24, 26, and 20-33 are objected to. Claims 9 and 26 are amended herein to address informalities pointed out in the final Office Action. Applicant requests that the amendments be entered in order to put the amended claims into better condition for allowance. Applicants respectfully traverse the rejection and request allowance of claims 1-33.

The Office Action states that the IDS filed on December 19, 2007, fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document. The Office Action specifically points to China patent application CN 1,289,408. However, Applicants previously provided WO 9939164, which is the English language equivalent of the Chinese application.

Dependent claim 25 was objected to for informalities. Specifically, the claim was objected to for the term “problem” on line 2 of the claim. Applicants find no such wording in claim 25. However, Applicants assume that claim 26 was meant and herein amend dependent claim 26. Likewise, dependent claim 10 is amended to change “multiple degree of freedom problem” to “multiple degree of freedom model”.

Claims 6-8, 10, 14-16, 22-24, 26, and 30-33 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants gratefully acknowledge the indication of allowability.

Claims 1-5, 9, 11-13, 17-21, 25, and 27-29 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,092,409 to Patten et al. Applicants respectfully traverse the rejection.

The Patten reference does not qualify as prior art against the present application. Per 35 U.S.C. 103(c)(1), “[s]ubject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of [35 U.S.C.] 102 . . . ,

shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person." Consequently, the Patten reference does not qualify as prior art and cannot be used against the present patent application.

An affidavit of Jeffrey D. Nehr is enclosed herein, showing the common ownership by Micro Motion, Inc., Boulder, Colorado, of the Patten reference and the present application. In addition, copies of the signed assignment from both the current application and the Patten patent are enclosed.

The above notwithstanding, the Patten reference does not anticipate the present claims. Independent claims 1 and 17 require comparing the initial flexural stiffness to the current flexural stiffness and detecting a calibration error condition responsive to comparing the initial flexural stiffness to the current flexural stiffness. The specification discloses that "[f]lexural stiffness is the static spring rate derived from flexing the flow tube with a known force pattern and measuring the flow tube displacement." See page 4, lines 11-12 (emphasis added). The measurement and use of the displacement response is further described at page 6, lines 10-13 of the present application. In some embodiments, the displacement and the force used to generate the displacement are used in order to determine the flexural stiffness. In other embodiments, the flexural stiffness is derived from the vibrational response (for example, see page 6, lines 21-24).

Patten does not disclose measuring, detecting, or otherwise using a displacement. In contrast, Patten discloses measuring a period of oscillation (see abstract). Patten discloses using the period of oscillation to calculate a density measurement for a known calibration fluid. The calculated density is then compared to a known density of the calibration fluid. An error can be determined if the calculated density differs too much from the known calibration fluid density.

The final Office Action asserts, in response to a previous argument, that Patten as a matter of course uses a flexural stiffness simply because Patten measures a period of oscillation. This is incorrect. Patten may be using a vibrational response in order to verify operation of a flow meter, but is using a different aspect of the vibrational response. Patten generates and compares a flow meter characteristic other than flexural

stiffness. Even though Patten and the present application both verify a flow calibration factor, they do it in different ways. Patten looks for changes in measured density for a known calibration fluid and interpolates a flow calibration factor change from a difference in measured density. The difference in density measurements is assumed to be a difference in just the flow calibration factor. In contrast, the present application measures a vibrational response and directly derives the flexural stiffness, wherein the flexural stiffness is assumed to be the changing component of the flow calibration factor.

Independent claims 1 and 17 therefore include features that are neither taught nor suggested by Patten. Dependent claims 2-5, 9, 11-13, 18-21, 25, and 27-29 are allowable for the same reasons as claims 1 and 17.

Applicants respectfully request allowance of claims 1-33. Please feel free to call to discuss the patentability of the pending claims.

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SIGNATURE OF PRACTITIONER

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Encl. Affidavit Of Jeffrey D. Nehr
Copy of signed Assignment
Copy of signed Assignment of U.S. Patent 6,092,409 to Patten et al.